



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

April 19, 2010

Joshua Bundick
WFF NEPA Manager
National Aeronautics and Space Administration
Goddard Space Flight Center
Wallops Flight Facility
Wallops Island, VA 23337

Re: Draft Programmatic Environmental Impact Statement (DPEIS), Wallops Flight Facility
Shoreline Restoration and Infrastructure Protection Project, Wallops Island, Virginia,
February 2010

Dear Mr. Bundick:

In accordance with the National Environmental Policy Act (NEPA) of 1969, Section 309 of the Clean Air Act and the Council on Environmental Quality regulations implementing NEPA (40 CFR 1500-1509), the U.S. Environmental Protection Agency (EPA) has reviewed the Draft Programmatic Environmental Impact Statement (DPEIS) for the Wallops Flight Facility (WFF) Shoreline Restoration and Infrastructure Protection Project (SRIPP). The proposed action involves the extension of the existing seawall and the placement of dredged sand on 3.7 miles of the Wallops Island Shoreline. Based on our review of the DPEIS, EPA has rated the environmental impacts of the preferred alternative as "EC" (Environmental Concerns) and the adequacy of the impact statement as "2" (Insufficient Information). The basis for this rating is contained in the remainder of this letter. A description of our rating system can be found at: www.epa.gov/compliance/nepa/comments/ratings.html.

The purpose and need of the proposed action is to reduce the potential for damage to, or loss of, NASA, U.S. Navy, and Mid-Atlantic Regional Spaceport (MARS) assets on Wallops Island from wave impacts associated with storm events. WFF located at Wallops Island is the only research range in the US that is controlled solely by NASA. Over fifty buildings are located on Wallops Island, including runways, sounding rocket launch pads and various support facilities. These assets are valued at over \$1 billion. NASA plans to protect existing and possible future infrastructure located on the barrier island by augmenting the shoreline with additional sand from offshore shoals and extending the seawall over a 50 year project lifespan.

The DEIS examines four alternatives for the SRIPP. They are: the No-Action Alternative, in which no beach fill would continue current conditions; Alternative One (the Preferred Alternative), which would extend the seawall up to 1,400m and place 3.199 million yd³ of dredged sand over 3.7 miles of shoreline; Alternative Two, which would extend the seawall up


to 1,400m, place 2.916 million yd³ of dredged sand over 3.7 miles of shoreline, and the construct a terminal groin; and Alternative Three, which would extend the seawall up to 1,400m, place 2.839 million cy³ of dredged sand over 3.7 miles of shoreline, and construct an offshore breakwater. Alternative One has been selected as the preferred alternative. We have rated Alternative One, the Preferred Alternative, as "EC-2" (Environmental Concerns, Insufficient Information). Alternatives other than the preferred are not rated by the EPA, but would likely to be considered to have higher potential environmental impact to adjoining barrier islands. Additional details on adverse impacts to aquatic resources, cultural resources, threatened and endangered species are needed to determine the full scale of potential impact.

The immediate actions in the preferred alternative lack the construction of hard structures; however, future replenishment cycles may include hard structures such as ones discussed in alternatives two and three. Since specific detail on future actions were not fully addressed in the DPEIS, specific information on the possible adverse impacts is unavailable. EPA is concerned about the unknown effects of future renourishment cycles. Future NEPA documentation for additional phases of the SRIPP may likely warrant the preparation of Environmental Impact Statements. EPA encourages NASA to continue to receive input from interagency teams and continue public involvement in the NEPA process. EPA looks forward to work with NASA as the life of the SRIPP continues.

EPA is concerned that sand borrow and placement operations will have adverse affects on the shoal and beach habitats, wildlife, and other environmental resources. Additional information is also needed to clarify monitoring and mitigation plans. EPA believes the DPEIS does not adequately provide analysis of secondary and cumulative effects of past, current and foreseeable future activities on the barrier island habitat and resources. Comments specific to the DPEIS can be found in an attachment to this letter. EPA cannot adequately assess the effects of the proposed undertaking on cultural resources since the location(s) of the pump-out station(s) has not been identified by WFF; detailed comments are included in the attachment. A review of Environmental Justice (EJ) portion of the document was completed by EPA's Regional Environmental Justice Coordinator, and comments provided in the enclosed attachment

Please consider the issues, questions and comments included in this letter and attachment. We would appreciate the opportunity to discuss the comments at your convenience. Thank you for allowing EPA with the opportunity to review and comment on the DPEIS. If you have questions regarding these comments, the contact for this project is Ms. Barbara Rudnick, NEPA Team Leader, at (215) 814-3322 or rudnick.barbara@epa.gov.

Sincerely,



Jeffrey D. Lapp, Associate Director
Office of Environmental Programs

Attachment

Detailed Comments

Purpose and Need & Alternatives

- The relocation of at risk infrastructure was not carried forward for detailed analysis. Explain why a relocation of pad and support facilities would need to maintain the same general size and layout of the current facilities. Are other configurations possible that may allow some or the entire infrastructure to be relocated? Has the acquisition of additional property been investigated to add to the NASA controlled buffer, which may enable additional Wallops Island infrastructure to be move onto the Mainland or Main Base?
- If facilities are not going to be relocated further on inland, EPA would recommend that further investment into future infrastructure on Wallops Island be avoided. The barrier island is a dynamic and unstable system that is very vulnerable to sea-level rise and intense storms. It may be prudent to consider this dynamic nature when looking at future development projects.
- Clarify what level of storm protection has been determined and why this specific level is necessary.
- All of the alternatives presented in the DPEIS include the extension of the existing seawall by 1400 meters, yet no discussion for why this extension is needed was included. Please explain why the seawall needs to be extended beyond its existing length and what infrastructure it is intending to protect, include existing and future projects. Clarify what is meant by ‘critical infrastructure.’
- Please provide more information on rationale for eliminating options during secondary screening, particularly the use of reduced beach fill. Clarify why this alternative was eliminated, the level of storm protection it would provide and how that relates to the purpose and need of the project.
- Page 64 states that if year two or three funding is pulled “the completed portions of the project would be viable projects themselves and wouldn’t have negative shoreline consequences.” If seawall only and seawall and partial beach fill are considered to be viable, they should both be considered as alternatives for the proposed action. Additionally, funding for the replenishment cycles should be discussed, as well as possibilities for funding not being secured for future cycles.
- Shoal B was eliminated from consideration for use during the initial beach fill for cost purposes. The environmental effects of sand borrow operations on both shoals should be evaluated prior to eliminating this option. It is not clear which shoal would be environmentally preferable for use in this project. The use of shoal A would require a greater percentage of total volume and total surface area, compared to shoal B. What analysis has been conducted to determine the ability of shoals to rebound after dredging?



Environmental Impacts

Wildlife, Endangered Species and Cumulative Effects

- EPA is concerned about the potential use of North Wallops Island as a potential borrow area for future nourishment cycles. This area is known piping plover habitat, a federally listed endangered species. Recirculation activities may have an adverse effect on plover habitat and actions should be consulted with FWS. Page 203 of the document states that “short-term adverse impacts to shoreline in the period of a few months to years after excavation activities” would occur. Include a discussion of North Wallops recovery time, the relationship to plover habitat. Additional information on monitoring is needed.
- Of further concern is the possibility of expanding plover habitat resulting from initial beach fill. Future nourishment activities may result in the disruption of newly created plover habitat. The proposed activity may also result in the development of SAV beds in the project area. These resources should be monitored for and protected.
- Page 255 says that a NMFS-approved observer will be present on board the dredging vessel during certain times of year. The role of the observer on the vessel needs further clarification.
- For adverse effects on wildlife and endangered species, a detailed monitoring and mitigation plan is needed. EPA encourages NASA to coordinate with FWS to develop and approve this plan. Additional coordination with FWS and NMFS for potential impacts to birds, threatened and endangered species, and essential fish habitat. Impacts to state listed species should be coordinated with appropriate state agencies.
- It is suggested that a secondary and cumulative effects analysis begin with defining the geographic and temporal limits of the study; this is generally broader than the study area of the project. Geographic boundaries are typically shown on a map; and a historic baseline is often set at a major event changing the local environment. In the case of WFF, this could be the start of the facility in the 1940's. Analysis of the trend of the value and quantity of the resources of interest should be developed and considered as part of cumulative impacts.
- The secondary and cumulative effects analysis should provide the documentation of consultation and coordination with agencies holding expertise. For instance, consultation on marine bathymetry and sand shoal resources should be added to support conclusions. Conclusion on assessment of impacts to turtles should not be presented until consultation with National Marine Fisheries and Fish and Wildlife Service has been finalized.
- The DPEIS does not provide a complete evaluation of activities that are expected to occur within the project timeframe, most notably the proposed cycling of sand. It would benefit the document to evaluate sand replenishment projects (including other replenishment projects, structures, etc.) on the barrier island complex as a whole. A discussion of potential impacts



of the follow-up actions to the preferred alternative would be appropriate in the cumulative impacts analysis. The conclusion that WFF projects may contribute, but would not be significant impact to endangered species has not supported; for instance, appropriate studies recommended by Fish and Wildlife Service for bird and bat impacts from the proposed turbines has not been completed.

Offshore Shoals

- The proposed dredge removal method involves contour and plane dredging. What other methods were considered and which method will allow the greatest recovery of the shoal? What is the expected recovery time for shoal A based on the proposed borrow operations? Include recommendations made by resource agencies with this expertise.
- Provide a map showing proposed mined areas. Proposed borrow areas within the shoals should be delineated.
- If a sand management plan has been prepared for the proposed action, please include it in the Final PEIS. EPA recommends that a sand management plan be prepared if it has not been done already. What are the monitoring efforts for shoals? How will erosional hotspots be identified?
- Clearly present the sand grain sizes that exist at Wallops, and how this compares to grain sizes found in both shoals A & B. What grain size has been determined to be ideal for this beach nourishment project?

Other

- A 25% loss rate of material during sand dredge and placement operations is predicted for this project, which results in 2-3 million yd³ of additional fill generated over the lifetime of the project. Please provide information supporting the use of this loss rate and what measures will be taken to reduce amounts of sand lost. Discuss any possible impacts that could result from these losses.
- Please discuss facility adaptation and the air emissions of the proposed action with respect to WFF as a whole, such as is directed by CEQ draft NEPA guidance (2010) on Considerations of the Effects of Climate Change and Greenhouse Gas Emissions.
- Existing underwater noise conditions have not been evaluated. Noise monitoring was last conducted in 1992. However, since that time conditions on the island have changed and operations have expanded. EPA recommends updating the 1992 study of baseline noise conditions at WFF.
- The DPEIS showed possible locations for MEC on WFF. Have potential shoal borrow areas been examined for possible MECs? Are any other hazardous materials beyond MECs found



in the project area or on Wallops Island? Please identify any active or past hazardous sites, CERLA or RCRA, that are known at WFF. An analysis should be conducted to determine if any of these areas have an adverse environmental effect with respect to the proposed action, as well as an MEC avoidance plan. Figure 29 presents MEC locations at WFF, which appear to cover a significant portion of the study area. Please explain how it is that MECs are not anticipated to be encountered.

- It is not clear how the proposed groin and breakwater structures will impact sand transport and effect neighboring barrier islands. What analysis has been conducted to determine these effects?

Cultural Resources

- Page 177 states, “In a letter dated December 4, 2003, the Virginia Department of Historic Resources (VDHR) concurred with the recommendations of the CRA and VDHR accepted the predictive model for archaeology at WFF, noting that many of the areas with moderate to high archaeological potential are unlikely to be disturbed by future construction or site use.” A copy of the letter dated December 4, 2003 from VDHR should be included in the Appendix. It would also be beneficial to include the *Cultural Resources Assessment for Wallops Flight Facility* in the Appendix of the FEIS to understand VDHR determination concluding that future construction or site use would not disturb potential archaeological areas without knowing the type of project work that could result in the future.
- Page 177 states, “In anticipation of the need for shoreline restoration measures, NASA conducted a pedestrian survey of 6.2 km (3.85 mi) of beach/coastline on Wallops Island on September 18, 2006 (Appendix C).” Please note that the pedestrian survey referenced is not included in Appendix C.
- Page 183, “Since the 2004 report, no additional identification and evaluation of above-ground historic properties has been conducted at WFF.” Considering the magnitude of the proposed project and other projects planned for WFF, it would be prudent to update the survey during the planning and environmental analysis phase of the proposed action to consider and evaluate all resources that may have the potential to be impacted. Since the location(s) of the pump-out station(s) has not been identified by WFF, this information would be useful in avoiding sites that may affect a resource.
- Page 185 states, “The archaeological predictive model presented in the CRA identified the potential to encounter pre-historic and historic sites on WFF (which was approved by VDHR in a letter dated December 3, 2003), including the Atlantic coast shoreline and near shore waters.” A copy of the letter from VDHR should be provided in the Appendix. Also, it is assumed that the letter referenced on page 177 and on page 185 from VDHR is one in the same; however, the date quoted is not the same (December 3 versus December 4). Please correct this discrepancy. Again, it would be helpful to include the *Cultural Resources Assessment for Wallops Flight Facility* in the Appendix of the FEIS.



- Page 269 states, “Underwater actions, which include dredging within Unnamed Shoal A or Unnamed Shoal B, pump-out operations in the nearshore environment east of Wallops Island, and the construction of a groin or breakwater, would only affect archaeological resources.” Please give more detail as to the archaeological resources that would be impacted. “The location(s) of the pump-out station(s) has not been identified by WFF.” Please indicate the possible number of pump-out stations that may be needed and identify potential locations for the pump-out stations. “Additional Section 106 consultation would be required for the area(s) around the pump-out station(s) once the location(s) has been identified.” It is recommended that the VDHR be consulted early and throughout the planning effort of determining pump-out station locations.

Environmental Justice Comments

- The EJ assessment should assure the protection and appropriate level of consideration for the potential adverse impacts that may have an effect on minority and low income populations living in the area near the site. The document should identify where such populations are located, and what potential impacts may occur.
- A definition of a minority community can be found on page 186 of the DPEIS. An exact definition of what constitutes a minority has not been released by EPA or the EJ Coordinators, this definition is inaccurate. We recommend, along with the removal of this statement, that minority and low income populations be compared to state and local demographics, defining minority and low income populations in relation to the state, county or local averages. More comprehensive demographic information regarding the minority and low-income populations of each community should be supplied along with maps highlighting the localization of those communities in relation to the site and any and all work that will be conducted.
- Please describe the efforts to ensure the protection of minority and low-income populations. Describe which communities were identified as potential EJ concern and how these populations are being involved through outreach in the decision making process.
- Residential displacements are not the only concern that should have been taken into consideration for potential EJ issues. Describe what other types of impacts were considered and include them in the DEIS. Potential concerns that were not included may be noise, air and water quality issues, changes in employment opportunities, and subsistence fishing impacts.



